

## CLAIMS

1. A method of allocating resources in a communication system,

2 comprising:

maintaining a set of weights corresponding to each of a plurality of

4 remote stations;

identifying a group of the remote stations having weights within a first

6 range of values;

determining a desirability metric value for each remote station in the

8 group; and

if any remote station in the group has pending data:

10 selecting from the group a most desired recipient having the

greatest desirability metric value and pending data; and

12 transmitting data to the most desired recipient.

2. The method of claim 1 further comprising:

2 determining the first range of values as a function of a minimum weight  
of the set of weights.

3. The method of claim 2 wherein determining the first range further

2 comprises:

defining the first range of values as weights falling within an offset K of

4 the minimum weight.

4. The method of claim 1 wherein if no remote station in the group has

2 pending data:

selecting a first recipient having a minimum weight of the set of weights;

4 and

transmitting data to the first recipient.

5. A wireless apparatus for allocating resources in a communication

2 system, comprising:

means for maintaining a set of weights corresponding to each of a

4 plurality of remote stations;

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means for identifying a group of the remote stations having weights  
6 within a first range of values;  
means for determining a desirability metric value for each remote station  
8 in the group;  
means for determining if any remote station in the group has pending  
10 data;  
means for selecting from the group a most desired recipient having the  
12 greatest desirability metric value and pending data if any remote station in the  
group has pending data; and  
14 means for transmitting data to the most desired recipient.

6. The apparatus as in claim 5 further comprising:  
2 means for selecting a first recipient having a minimum weight of the set  
of weights; and  
4 means for transmitting data to the first recipient.

7. A processing apparatus to schedule data transmissions to remote  
2 stations in a communication system, comprising:  
a memory storage unit;  
4 a processor coupled to the memory storage unit and adapted for:  
maintaining a set of weights corresponding to each of a plurality  
6 of remote stations;  
identifying a group of the remote stations having weights within a  
8 first range of values;  
determining a desirability metric value for each remote station in  
10 the group; and  
if any remote station in the group has pending data:  
12 selecting from the group a most desired recipient having  
the greatest desirability metric value and pending data; and  
14 transmitting data to the most desired recipient.

8. The apparatus as in claim 7, wherein the processor is further adapted  
2 for:  
selecting a first recipient having a minimum weight of the set of weights;  
4 and

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transmitting data to the first recipient.

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9. A computer program stored on a computer-readable medium,  
comprising instructions and commands for scheduling data transmissions in a  
communication system by:

maintaining a set of weights corresponding to each of a plurality of  
receivers in a communication system;

identifying a group of the remote stations having weights within a first  
range of values;

determining a desirability metric value for each remote station in the  
group;

determining if any remote station in the group has pending data:

selecting from the group a most desired recipient having  
the greatest desirability metric value and pending data if any remote  
station in the group has pending data; and

transmitting data to the most desired recipient.

10. The computer program as in claim 9, further comprising instructions for:

selecting a first recipient having a minimum weight of the set of weights;

and

transmitting data to the first recipient.

11. An infrastructure element in a communication system, comprising:

a plurality of data queues, wherein each data queue is associated with a  
receiver in the communication system;

a scheduler for selecting a first queue of the plurality of data queues by:

maintaining a set of weights corresponding to each of the plurality  
of receivers;

identifying a group of the receivers having weights within a first  
range of values;

determining a desirability metric value for each receiver in the  
group; and

if any receiver in the group has pending data:

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12                    selecting from the group a most desired recipient having  
the greatest desirability metric value and pending data; and  
14                    transmitting data to the most desired recipient.

12.    The infrastructure element as in claim 11 wherein the scheduler is  
2    further adapted for:  
         selecting a first recipient having a minimum weight of the set of weights;  
4    and  
         transmitting data to the first recipient.

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